Project Development & Design Tools

Watch Yourself

wearable personal safety app

## 

Team Phoenix:

Alisha Zaveri (300912073)

Jaismeen Sandhu (300877728)

Lawrence Martin (300782358)

## Samsung SDK

**Samsung SDK Integration**

For our “Watch Yourself” Android application we will be utilizing Tizen Studio and the Samsung Accessory SDK to create a Gear and Gear companion application. The Accessory SDK allows you to define a service between the Gear S smartwatch and the host device. This creates a connection between the watch and host device allowing you to access various host device Android APIs.

**Accessory SDK Features**

This application will leverage the “remote control” feature of the Accessory SDK which allows you to remotely access various APIs on the host device such as the Camera. Our application will target the Camera, Audio Recorder, Messaging and Voice Calling as well as Location services. Other features which we will not be using but are included in the SDK are Notification Relay, paired device Location Finding, and File Transfer.

## Screen Shot 2016-10-05 at 11.01.49 AM.png(Image courtesy of <http://developer.samsung.com/galaxy/accessory>)

**How it works**

Samsung has created a Samsung Accessory Ecosystem which consists of all the devices that use the Accessory SDK including Galaxy phones, and Gear smart watches among other Samsung smart devices. The Samsung Accessory Service Framework allows these devices to communicate through a single communication protocol that is supported by WiFi, Bluetooth classic and Bluetooth v4.0 (BLE).

The Accessory SDK consists of three packages, com.samsung.android.sdk, com.samsung.android.sdk.accessory, and com.samsung.android.sdk.accessory.filetransfer which provide all the necessary classes required to communicate between the host and peer devices.

It is necessary to have the Samsung Accessory Service Framework installed on both devices in order to pair them successfully. All Gear smartwatches include this framework as well as any other device running minimum target API 19 Android Kit Kat 4.4 and above.

### Definition of Tools Used

Software

* IntelliJ IDE + Android Studio v. 2.2
* Android SDK Tools
* Android Platform-tools
* Android Emulator with an Android system image
* Tizen Studio
* Samsung Accessory SDK v. 2.4.0

Devices

* Samsung Galaxy Note 5 (Marshmallow api 23)
* Samsung Gear S2 Classic Smartwatch